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[54] **DATA MANAGEMENT SYSTEM FOR FILE AND DATABASE MANAGEMENT**

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[52] **U.S. Cl.** **707/8; 707/3; 707/4; 707/10; 707/102; 707/103**

[58] **Field of Search** 707/3, 4, 8, 10, 707/102, 103

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[57] **ABSTRACT**

A design control system suitable for use in connection with the design of integrated circuits and other elements of manufacture having many parts which need to be developed in a concurrent engineering environment with inputs provided by users and or systems which may be located anywhere in the world providing a set of control information for coordinating movement of the design information through development and to release while providing dynamic tracking of the status of elements of the bills of materials in an integrated and coordinated activity control system utilizing a repository which can be implemented in the form of a database (relational, object oriented, etc.) or using a flat file system. Once a model is created and/or identified by control information design libraries hold the actual pieces of the design under control of the system without limit to the number of libraries, and providing for tracking and hierarchical designs which are allowed to traverse through multiple libraries. Data Managers become part of the design team, and libraries are programmable to meet the needs of the design group they service.

16 Claims, 318 Drawing Sheets

DATA MANAGEMENT SYSTEM

PACKAGE MANAGER 1 | LIBRARY MANAGER 2 | PROCESS MANAGER 3
AUTHORITY MANAGER 4 | SEARCH MANAGER 5 | LOCK MANAGER 6
AGGREGATION MANAGER 7 | COMMUNICATIONS MANAGER 8
EC/PN CONTROL MANAGER 9 | 10

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